

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A bus clock controlling method in a computer, comprising:

setting a throttle rate of a clock to a predetermined initial value, the clock ~~being used for~~ configured to set a speed of a data bus connected between a CPU and a controlling device;

detecting a remaining battery capacity if a present power source is at least one battery; and

adjusting the set throttle rate ~~using~~ by the controlling device according to the detected remaining battery capacity, wherein the set throttle rate is adjusted when the controlling device is providing the clock to the data bus between the CPU and the controlling device.

2. (Original) The method set forth in claim 1, wherein said adjusting step increases the set throttle rate as the detected remaining battery capacity decreases.

3. (Original) The method set forth in claim 1, wherein said adjusting step selects one value appropriate to the detected remaining battery capacity among a plurality of throttle rates preset in reverse proportion to different remaining battery capacities.

4. (Currently Amended) The method set forth in claim 1, wherein said controlling device is a bridge controller in a computer, wherein a second clock is provided to the controlling device and the CPU, and wherein the throttle rate of the clock is set independently of the second clock, and wherein the clock has a different value than the second clock.

5. (Currently Amended) A bus clock controlling method in a computer, comprising:

setting a throttle rate of a clock to a predetermined initial value, the clock ~~being used for~~ configured to set a speed of a data bus connected between a CPU and a controlling device;

detecting a present load of the CPU; and

adjusting the set throttle rate ~~using the controlling device~~ in reverse ~~proportion relation~~ to the present CPU load by the controlling device, wherein the set throttle rate is adjusted when the controlling device is providing the clock to the data bus between the CPU and the controlling device.

6. (Currently Amended) The method set forth in claim 5, wherein said adjusting step is conducted only when a present power source is at least one battery, wherein a second clock is provided to the controlling device and the CPU, and wherein the throttle rate of the clock is set independently of the second clock, and wherein the clock has a different value than the second clock.

7. (Original) The method set forth in claim 5, wherein said adjusting step includes selecting a new throttle rate appropriate to the detected CPU load from a plurality of throttle rates preset in reverse proportion to different CPU loads.

8. (Currently Amended) A computer, comprising:
a CPU that processes;
a first controller coupled to the CPU via a data bus, and configured to provide a throttled clock to the data bus according to a throttle rate;

a clock generator coupled to the CPU and the first controller, and configured to generate a clock for the CPU and the first controller;

a detector detecting a variable, wherein the variable is a remaining battery capacity or a load of the CPU; and

a second controller coupled to receive the detected variable, configured to determine the throttle rate according to the detected variable, and further configured to output the throttle rate to the first controller, wherein the throttled clock is configured to selectively have a different independent value than the clock supplied to the first controller and the clock supplied to the first controller.

9. (Original) The computer of claim 8, wherein said second controller outputs the throttle rate in the form of a pulse signal whose duty cycle varies in accordance with the detected variable, and wherein the first controller includes a throttle controller providing the data bus with the throttled clock only when the pulse signal is in a specific state.

10. (Currently Amended) The computer of claim 8, wherein said first controller is a bridge controller, and wherein said second controller determines the

throttle rate in reverse proportion to the detected variable, wherein the bridge controller directly sets the throttled clock speed of the data bus.

11. (Original) The computer of claim 8, wherein the throttle rate increases as a value of the detected variable decreases.

12. (Original) The computer of claim 8, wherein the second controller comprises:

at least one comparator coupled to receive the detected variable from the detector, configured to compare the detected variable to a plurality of predetermined values, and further configured to output a result of the corresponding plurality of comparisons; and

a host clock throttler coupled to receive the plurality of comparisons and a power mode signal, and configured to output the throttle rate to the first controller.

13. (Original) The computer of claim 12, wherein the at least one comparator comprises a remaining battery capacity comparator, and wherein the detected variable is the remaining battery capacity.

14. (Original) The computer of claim 12, wherein the at least one comparator comprises a CPU load comparator, and wherein the detected variable is the load of the CPU.

15. (Original) The computer of claim 12, wherein the at least one comparator comprises a remaining battery capacity comparator and a CPU load comparator.

16. (Currently Amended) A bus clock controlling method in a computer, comprising:

setting a throttle rate of a clock to a predetermined initial value, the clock being used for a data bus to which both a CPU and a controlling device are connected;

detecting a remaining battery capacity ~~and~~ or a load of the CPU if a present power source is a battery; and

adjusting the set throttle rate according to the detected remaining battery capacity and the CPU load, wherein ~~the~~ a second clock is provided to the controlling device and the CPU, and wherein the throttle rate of the clock is set independently of the second clock, and wherein the clock has a different value than the second clock.

17. (Currently Amended) A bus clock controlling method in a portable computer, comprising:

setting a throttle rate of a clock to a predetermined initial value, the clock being used for a data bus connected between a controlling device and a selected one of a plurality of devices associated with the portable computer;

detecting a condition of a remaining battery or a CPU load of the portable computer if a present power source is a battery; and

adjusting the set throttle rate using the controlling device according to the detected condition, wherein the detected condition is within a range of values for the prescribed criteria, wherein a first clock is provided to the controlling device and a second clock is provided the CPU, and wherein the throttle rate of the clock is set independently of the first clock and the second clock, and wherein the clock has a different value than the first clock and the second clock.

18. (Currently Amended) The bus clock controlling method of claim 17, wherein the selected device is a peripheral device, and wherein the predetermined initial value is a smallest throttle rate, wherein the controlling device directly sets the clock during normal operations.

19. (Previously Presented) The bus clock controlling method of claim 17, wherein said adjusting step selects a rate corresponding to the detected condition among a plurality of prescribed throttle rates that each correspond to mutually exclusive sets of values of the detected condition within the range of values for the prescribed criteria.

20. (Original) The bus clock controlling method of claim 19, wherein each of the plurality of prescribed throttle rates increases as the detected condition decreases within the range.

21. (Previously Presented) A bus clock controlling method in a computer, comprising

setting a throttle rate of a clock to a predetermined initial value, the clock being used for a data bus to which both a controlling device and a peripheral device are connected;

detecting one member chosen from a present load of the CPU and a remaining battery capacity; and

adjusting the set throttle rate by the controlling device in reverse proportion to the detected one of the present CPU load and the remaining battery capacity.

22. (Canceled)
23. (Previously Presented) The method of claim 1, comprising:
generating the clock for the CPU and the controlling device; and
determining the throttle rate using a second controlling device according to the remaining battery capacity and outputting the throttle rate to the controlling device, wherein said second controlling device outputs the throttle rate in the form of a pulse signal whose duty cycle varies in accordance with the detected remaining battery capacity, and wherein the controlling device includes a throttle controller providing the data bus with the throttled clock only when the pulse signal is in a specific state.
24. (Previously Presented) The method of claim 5, comprising:
generating the clock for the CPU and the controlling device; and
determining the throttle rate using a second controller according to the remaining battery capacity and outputting the throttle rate to the controlling device, wherein said second controller outputs the throttle rate in the form of a pulse signal whose duty cycle varies in accordance with the present load of the CPU, and wherein

the controlling device includes a throttle controller providing the data bus with the throttled clock only when the pulse signal is in a specific state.

25. (Previously Presented) The method of claim 21, comprising:
generating the clock for the CPU and the controlling device; and
determining the throttle rate using a second controller according to the remaining battery capacity and outputting the throttle rate to the controlling device, wherein said second controller outputs the throttle rate in the form of a pulse signal whose duty cycle varies in accordance with the detected one of the present CPU load and the remaining battery capacity, and wherein the controlling device includes a throttle controller providing the data bus with the throttled clock only when the pulse signal is in a specific state.

26. (New) The method of claim 16, wherein a third clock is provided to the CPU, wherein the clock as a different value than the third clock.